DOCUMENT RESUME

ED 360 370 TM 020 274

AUTHOR Ferrell, Charlotte M.; Ferguson, William F.
TITLE Assessing Graduate Education Students' Propensity toward Academic Misconduct.
PUB DATE Apr 93
NOTE 34p.; Paper presented at the Annual Meeting of the American Educational Research Association (Atlanta, GA, April 12-16, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Behavior Problems; *Cheating; Doctoral Degrees; *Education Majors; Elementary School Teachers; *Ethics; Factor Analysis; *Graduate Students; Higher Education; *Integrity; Masters Degrees; *Moral Values; Secondary School Teachers; Student Attitudes; *Teacher Responsibility
IDENTIFIERS *Academic Misconduct; Academic Misconduct Survey

ABSTRACT

Researchers have often noted the desirability of investigating the incidence of academic misconduct of college students who will be in employment fields requiring a high level of competence and/or a high level of personal integrity, such as elementary school and secondary school teachers. The Academic Misconduct Survey (AMS) developed by Charlotte M. Ferrell (1992) was studied as a way of distinguishing groups of graduate education students relative to their propensity for various forms of misconduct (including cheating on tests and assignments, use of illegal resources, quasi-misconduct, subtle manipulation, and bold manipulation). Forty-one graduate students in master's and doctoral degree programs at a southern university completed the instrument. Separate principal components Q-technique factor analytic procedures were conducted with data from master's (n=20) and doctoral (n=21) cohorts. These analyses indicate that subjects' responses to the AMS items serve as an effective means of distinguishing clusters of individuals relative to the academic misconduct constructs measured by the instrument. Person factors that emerged share many of the same characteristics. Findings confirm those of Ferrell (1992) using a different data collection technique and item stem. Appendix A lists the factors and Appendix B is the data sheet. Five tables present study findings. (Contains 50 references.) (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

Assessing Graduate Education Students' Propensity Toward Academic Misconduct

ED360370

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.

Minor changes have been made to improve reproduction quality.

Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
William F. Ferguson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Charlotte M. Ferrell

Concordia Parish (LA) Public Schools

William F. Ferguson

The University of Southern Mississippi

Running Head: ASSESSING ACADEMIC MISCONDUCT

Paper presented at the annual meeting of the American Educational Research Association, April 12-16, 1993, Atlanta, GA.

BEST COPY AVAILABLE

TM 020 214

Abstract

Researchers have often noted the desirability of investigating the incidence of academic misconduct of college students who will be in employment fields requiring a high level of competence and/or demanding a high level of personal integrity (e.g., elementary and secondary teachers). The purpose of the present was to determine whether the Academic Misconduct Survey (AMS) (Ferrell, 1992) could be useful in distinguishing groups of graduate education students relative to their propensity toward various forms of misconduct. Forty-one graduate students enrolled in master's and doctoral degree programs at a comprehensive university in the southern United States completed the instrument.

Separate principal components Q-technique factor analytic procedures were conducted with data collected from each sample (i.e., master's cohort and doctoral cohort). These analyses indicated that subjects' responses to items on the AMS served as an effective means of distinguishing clusters of individuals relative to the academic misconduct constructs measured by the instrument. The person factors which emerged shared many of the same characteristics. Findings of the present study confirm those determined by Ferrell (1992), using a different data collection technique and item stem.

Assessing Graduate Education Students'

Propensity Toward Academic Misconduct

Academic misconduct has been defined as "dishonest acts connected with coursework such as cheating on tests, examinations, and assignments" (Rich, 1984, p. 69), as well as employing other questionable or deviant behaviors, including illegally obtaining examinations, plagiarizing all or part of a course-assigned paper, falsification of information, and the theft and mutilation of library materials. Academic misconduct, more commonly referred to as cheating, has been regarded as "a form of deviancy . . . resulting from an acceptance of the institutionalized goals but not the institutionalized means" (Harp & Taietz, 1966, p. 366).

Academicians have long recognized cheating as a serious problem in higher education. In fact, research literature for some 60 years has focused on the nature of college students' academic misconduct (e.g., Bowers, 1964; Campbell, 1933; Drake, 1941; Haines, Diekhoff, LaBeff, and Clark, 1986; Harp and Taietz, 1966; Kirk, 1971; McQueen, 1957; Parr, 1936; Sherrill, Salisbury, Horowitz, and Friedman, 1971; Stafford, 1976; Stern and Havlicek, 1986). Even popular magazines have occasionally presented articles on the topic (e.g., "Cheating in Colleges," 1976; Mano, 1987; Selwall, Drake, and Lee, 1980; Wellborn, 1980).

In a survey of college deans and student body presidents, Bowers (1964) found that academic dishonesty was considered second only to disorderly conduct as the most serious student discipline problem. As early as 1936, Parr conceded it was common knowledge that

"cheating occurs in most college classrooms" (Parr, 1936, p. 318). Fifty years later, Haines et al. (1986, p. 342) echoed these sentiments, noting that "it is unlikely that those associated with academia for any length of time would deny the presence of student cheating." Likewise, Michaels and Miethe (1989, p. 870) assert that "cheating is considered a significant problem because of its frequency, and because it interferes with conventional learning and evaluation processes." Although most researchers agree that academic dishonesty is a "threat to academic integrity," consensus as to the "magnitude of such a threat" has not been reached (Karlins, Michaels, & Podlogar, 1988, p. 359).

According to Michaels and Miethe, "academic cheating is viewed by students as part of the larger game of beating the system" (p. 883). As a possible explanation for the proliferation of college cheating, Fass (1986, p. 32) has noted:

> Unfortunately, this generation of students . . . has become inured to several widely publicized examples of unethical behavior within academe: major cheating scandals at U. S. service academies, exposure of fraudulent fabrication of data by scientific researchers, and revelations about recruiting violations and drug abuse in college athletics. . . . Some of today's students may well conclude from these examples that cheating in college is just another generally accepted way of getting ahead, akin to overstating the virtues of a commercial product or exaggerating personal accomplishments on a resume. (emphasis added)

Nucci and Pascarella (1987) assert that higher education is often expected to take a leading role in promoting the improvement of ethical standards and behavior; hence control of cheating may currently be perceived as a more urgent problem than in years past. Consequently, Fass (1986) suggested that academic dishonesty should not be ignored or tolerated and that academic and professional ethics must be promoted if an institution of higher learning "is to be regarded as a community in which it is legitimate to hold students to the highest standards of behavior in their academic work" (p. 35).

To date, most studies involving the academic misconduct of students in higher education have dealt with students in general. Fewer studies to determine the extent to which students in particular fields engage in cheating have been conducted. These studies include investigations of academic dishonesty among students in psychology (Hetherington & Feldman, 1964), medicine (Sierles, Hendrickx, & Circle, 1980), nursing (Harnest, 1986; Hilbert, 1985), marketing (Tom & Borin, 1988), communication (Pratt & McLaughlin, 1989) and engineering (Singhal, 1982). An extensive search of the published literature indicated that studies investigating the cheating behaviors of college students in education were virtually nonexistent, studies by Wilkinson (1974), Daniel, Blount, and Ferrell (1991), and Ferrell (1992) notwithstanding.

The obvious paucity of studies dealing with academic dishonesty among teacher education students is surprising considering the amount of attention given to the professional ethics of teachers in recent years. Recent texts such as Tom's *Teaching as a Moral Craft* (1984), Strike and Soltis' *The Ethics of Teaching* (1985), Rich's *Professional Ethics in*

Education (1984), and Goodlad, Soder, and Sirotnik's *The Moral Dimensions of Teaching* (1990) illustrate academia's and the public's growing interest in ethics within the teaching profession. Other recent works (e.g., Sichel, 1990; Soltis, 1986) have also stressed the importance of the professional ethics of teachers.

Rich (1985) asserts that the development of a generally accepted code of professional ethics will aid teaching in its endeavor to become a "true" profession. As professionals, it is therefore important for educators to maintain a high level of personal integrity. Ellis, Cogan, and Howey (1991, pp. 37-38) note, "There is something implicit in the role of a teacher that calls for high moral character and positive social values. . . . [Å] true professional aspires to conduct of the highest ethical standards, shunning even the hint of impropriety."

Soltis (1986) further elaborates the need for teachers to possess a general sense of moral propriety:

> When a person becomes a member of a profession, he or she joins a historical community of practice with a telos, a general purpose, that one must be committed to in order to be a professional. . . . [I]n the tradition of a practice like teaching, certain standards of conduct and of manner develop in support of the telos and become recognized as a desirable part of the moral climate of the practice. In the treatment of students, of subject matter, and of colleagues, honesty, truth, and justice become central virtues of the practice. (p. 2--emphasis added)

The fact that teachers function as "moral educators" (Howe, 1985, p. 5) cannot be avoided. Moreover, previous researchers (Michaels & Miethe, 1989) have noted that academic dishonesty may generalize to other organizational settings and that those who cheat in college may rely on similar adaptations in carrying out their responsibilities in their careers. Therefore, research on the nature of graduate education students' academic behavior was warranted.

Purpose

The purpose of the present study was to identify different orientations of graduate education students relative to academic misconduct. Specifically, Q methodology was used to determine whether a set of attitudinal items could be used to identify prototypic clusters of master's and doctoral students regarding their propensity toward engaging in academic misconduct.

Hypotheses

The central research question addressed in the study was: Can a valid self-report survey instrument called the Academic Misconduct Survey (Ferrell, 1992) be used to identify clusters of graduate education students who represent prototypes of individuals with similar behavioral characteristics which would indicate their level of propensity toward academic misconduct?

The following null hypotheses were proposed for investigation and subjected to empirical testing:

1. No identifiable person clusters will emerge when responses on the Academic Misconduct Survey for students seeking a master's degree in education at a selected university are intercorrelated and factor analyzed using the Q-technique.

2. No identifiable person clusters will emerge when responses on the Academic Misconduct Survey for students seeking a doctoral degree in education at a selected university are intercorrelated and factor analyzed using the Q-technique.

Methodology

Sample

Two independent samples were utilized for the purpose of the present study. Data were collected from 41 graduate education students enrolled in a comprehensive state university in the southern United States. Sample I (n = 20) was comprised of students enrolled in a master's degree program, while persons in Sample II (n = 21) consisted of doctoral students. These data were used in two separate Q-technique factor analyses to identify clusters of persons within each sample who had a propensity toward the various academic misconduct constructs assessed using the AMS and to test the two hypotheses.

Instrumentation

A self-report survey instrument called the Academic Misconduct Survey (AMS) (Ferrell, 1992) was used to measure the cheating behaviors of the respondents. The AMS consists of 41 Likert-type items which measure academic misconduct across five dimensions or constructs, namely cheating on tests and assignments, use of illegal resources, quasi-misconduct, subtle manipulation, and bold manipulation (Factors I through V, respectively).

Items for the AMS were written to reflect perceived incidents of academic dishonesty expressed by various researchers in the professional literature. A copy of the items included in the instrument is presented in Appendix A. Results of procedures to establish the reliability and construct validity of the AMS are reported by Ferrell (1992).

Data Collection and Analysis

Data were collected during regular class sessions from two samples of graduate education students at the selected institution. Students were informed of their option to participate in the study and complete anonymity of responses was assured. These data were analyzed using Q methodology, a family of factor analytic procedures for clustering persons across a given set of items.

The AMS items were printed on cards. Each subject was provided with a deck of 41 cards and a data sheet illustrating the card sorting procedure which resulted in a quasi-normal distribution. Respondents were asked to consider the following stem in reference to each of the statements printed on the cards: "As a graduate student, I would be likely to . . . ." Subjects were instructed to place varying numbers of cards in each of seven stacks along a continuum ranging from "Strongly Disagree" to "Strongly Agree" and then to rank order the cards within each stack. The first card in stack one was the behavior with which the respondent most strongly disagreed. The last card in stack seven was the behavior with which the respondent most strongly agreed.

After sorting and rank ordering the cards, subjects recorded the card numbers on their data sheet below the appropriate stack symbol. A copy of the data sheet is presented in

Appendix B. Respondents were identified only by the degree sought (i.e., master's or doctorate). A transparent data sheet with numbered lines was used to determine subjects' unique rankings of the items; each item received a rank equal to the line number on which it was placed. Within each sample, subjects' rankings of the 41 items formed the rows on the raw data matrix, while the persons defined the columns. These data were then intercorrelated and factor analyzed using the SPSSx FACTOR procedure.

Separate Q-technique factor analyses were performed for each sample of graduate education students. The purpose of these analyses was to attempt to identify clusters of persons within each sample who had a propensity toward the various academic misconduct constructs assessed using the Academic Misconduct Survey and to test the previously stated null hypotheses.

Results

Based on the magnitude of eigenvalues and factor "scree" plots (Cattell, 1966), two factors were extracted across each of the groups using the principal components method, and results were rotated to the varimax criterion. Persons in Sample I (i.e., students seeking a master's degree) were identified with factors using minimum factor structure coefficient criterion of $| .55 |$, and persons in Sample II (i.e., doctoral students) were identified with factors using minimum factor saliency criterion of $| .50 |$.

Once person factors were determined in a given sample, standardized regression factor scores were utilized to determine which items contributed to the emergence of each of the person factors and, thereby, to determine the type or types of misconduct in which

persons in a given factor were more likely or less likely to engage. In Q-technique analysis, regression factor scores serve as z-scores for each of the items on each of the factors. Q-technique factor scores indicate "the degree to which individuals within a given sample deviate from the mean response on a given item where these deviations help to differentiate the clusters of persons" (Daniel, 1989a, p. 148). Thus, for the purposes of interpreting the person factors obtained in the factor analyses performed on the data in the present study, items with factor scores greater than | 1.000 | were examined.

In the present study, a negative factor score with an absolute value greater than 1.000 indicated that the respondents were less likely to engage in the behavior, and positive factor scores greater than +1.000 indicated a greater propensity to engage in the behavior as compared to respondents in other clusters. Respondents who reported an orientation toward participation in a certain type of misconduct to a greater or lesser degree than the rest of the group were differentiated by a factor score greater than | 1.000 | . It is appropriate to note that these self-reported behaviors may not necessarily occur. These data merely indicate a tendency for these groups of people to behave in a certain way.

Sample I Analyses. The initial principal components analysis of the data from Sample I (n = 20) yielded four factors with prerotational eigenvalues greater than unity. Analysis of the scree plot of the eigenvalues suggested the appropriateness of a two-factor solution. In an attempt to find the most interpretable solution, two subsequent analyses were performed using solutions extracting both two and three factors. An examination of the rotated factor matrix and the factor scores for these three solutions indicated that the two-

factor solution, which explained 65.5% of the prerotational variance, was the most interpretable.

All 20 individuals in Sample I were identified with one of the two factors, using a factor saliency criterion of > | .55 | , and Persons 1 and 16 were correlated with both Factor I and Factor II. The rotated factor matrix and factor scores for this solution are presented in Tables 1 and 2, respectively.

Insert Tables 1 and 2 about here

Factor I (Persons 1, 2, 10, 11, 12, 15, 16, 17, 18, and 20), with a prerotational eigenvalue of 10.99, accounted for 54.9% of the variance across the solution (10.99 ÷ 20 = .5493). Factor II (Persons 1, 3, 4, 5, 6, 7, 8, 9, 13, 14, 16, and 19) had a prerotational eigenvalue of 2.11 and explained 10.5% of the total variance (2.11 ÷ 20 = .1055).

Sample II Analyses. Results of the principal components analysis for Sample II (n = 21) indicated four factors with prerotational eigenvalues greater than one. Analysis of the scree plot of the eigenvalues suggested the appropriateness of a two-factor solution. Hence, two subsequent analyses were performed using solutions extracting both two and three factors. The two-factor solution was deemed interpretable once results were rotated using the varimax procedure. These two factors accounted for 62.2% of the explained variance. Given an operational definition of item saliency and using a minimum factor structure coefficient of | .50 | , all 21 persons were correlated with one of the two factors, and Persons 11 and 13 were correlated with both Factors I and II.

Factor I, with a prerotational eigenvalue of 10.80, accounted for 51.4% of the variance across the solution (10.80 ÷ 21 = .5142). This factor consisted of Persons 1, 2, 4, 5, 6, 7, 10, 11, 12, 13, 15, 16, and 20. Persons 3, 8, 9, 11, 13, 14, 17, 18, 19, and 21 were identified with Factor II which had a prerotational eigenvalue of 2.27 and explained 10.8% of the total variance (2.27 ÷ 21 = 1080). The varimax rotated factor matrix for this solution is presented in Table 3, and factor scores for each of the items are presented in Table 4.

Insert Tables 3 and 4 about here

Discussion

Q-technique methodology is employed to intercorrelate and factor analyze the responses of persons on an instrument using an "inverse" raw data matrix in which persons define the columns and variables define the rows. Kerlinger (1979) refers to the resulting factors as "persons' factors" (p. 200). These persons' factors, or person-prototypes (Lorr, 1983), are the groups of subjects who respond differently from other subjects on a given set of items. The main focus of Q methodology is on these correlations among individuals (Kerlinger, 1979). Several researchers (e.g., Edwards, 1957; McCollum & Thompson, 1980; Thompson, 1980) have noted that Q-technique is especially helpful when subjects' responses are prone to be biased by "social desirability," as was potentially the case in the present study since academic misconduct is usually considered to be deviant.

Generally, Q methodology data are collected by having subjects sort an array of stimuli (e.g., individual items each printed on a series of cards) into hierarchically arranged piles. Items which are most and least characteristic of the rater are placed at opposite ends of a continuum in categories such as "Most Like Me" and "Least Like Me" or "Strongly Agree" and "Strongly Disagree."

A common criticism of the conventional Q-sorting strategy is that differences among items within a given category are ignored (Daniel, 1989b; Thompson, 1980). The forced-choice format provides all subjects with the same mean rating, the same standard deviation of ratings, and the same distribution of ratings (Carr, 1989). Hence, Thompson (1980) has suggested a "mediated-ranking procedure" in which the subjects are instructed to sort the cards using the conventional strategy and then to rank order the cards within each category. According to Thompson, the mediated-ranking strategy provides a way for the researcher to collect more information, allow for more variance, and to identify factors which are more reliable. Thus, Thompson's alternative card-sorting procedure was employed in the present study.

Data utilized for the present study were collected by administering the AMS during regular class sessions to graduate education students enrolled in a comprehensive state university located in the southern United States. Respondents in Sample I (n = 20) were students seeking a master's degree. Subjects in Sample II (n = 21) were enrolled in a doctoral degree program. Subjects in both samples responded to survey items via a mediated-ranking procedure, an alternative to the traditional Q-sorting strategy. The person

factors which emerged across these two samples of graduate education students shared many of the same characteristics.

Discussion of Sample I Analyses

Persons in Factor I consisted of students who indicated a propensity toward behaviors related to various forms of subtle manipulation (Items 4, 10, 15, and 29) and behaviors identified as quasi-misconduct (Items 17, 19, 20, 21, and 25). This person cluster was differentiated from Factor II persons who gave high rankings to items related to cheating on tests and assignments (Items 5, 12, and 14) and use of illegal resources (Items 29 and 31).

Persons in Factor II also expressed a positive orientation toward several behaviors which are not necessarily considered deviant (i.e., quasi-misconduct). Persons in both clusters indicated a tendency to read a condensed version of a novel/play/etc. rather than the assigned full length version (Item 17); have a term paper corrected for errors in style, language, grammar, etc., when these elements were being graded (Item 21); and base an article report on an abstract rather than reading the entire article (Item 25). In addition, Factor I people who emphasized a positive orientation toward quasi-misconduct were more likely to consciously memorize a block of questions on an exam so that they could review them at a later date (Item 19) and have a term paper corrected for errors in style, language, grammar, etc., when these elements were not being graded (Item 20).

In contrast to the persons in Factor II, the person cluster in Factor I gave lower rankings to items related to cheating on tests and assignments (Items 1, 2, 8, 12, 27, 28, and 40). The negative orientation toward this type of misconduct expressed by persons in Factor

I pertained to cheating on tests and assignments which would occur inside the classroom, while the positive orientation expressed by the Factor II cluster dealt with cheating on tests and assignments outside the classroom. In addition, persons in Factor II gave lower rankings to both subtle and bold manipulative behaviors (Items 4, 10, 15, 22, 24, 26, 32, 33, and 38). Conversely, persons in Factor I expressed a positive orientation toward several of the same behaviors (Items 4, 10, and 15).

The Q-technique factor analyses, using Sample I data, indicated that the subjects' responses to items on the Academic Misconduct Survey served as an effective means of grouping individuals according to their propensity toward various forms of academic misconduct. Based on these results, hypothesis one was rejected.

Discussion of Sample II Analyses

Factor I persons reacted positively to items dealing with quasi-misconduct (Items 17, 20, and 21). Persons in this cluster also tended to give higher rankings to items pertaining to subtle manipulation (Items 4, 10, 15, 33, and 39). This person cluster was differentiated from Factor II persons who ranked low the items related to subtle and bold manipulative behaviors (Items 4, 24, 32, 33, and 38).

Individuals in Factor II also ranked high several of the behaviors considered to be quasi-misconduct (Items 17, 19, 20, and 25). Additionally, this group expressed a propensity toward cheating on tests and assignments (Items 12 and 14) as well as use of illegal resources (Items 16 and 37). Persons in Factor I reacted negatively to cheating on tests and assignments (Items 1, 12, 27, 28, 35, and 40). The majority (all but two) of these

items dealt with behaviors which would occur inside the classroom. Interestingly, persons in both factors across both samples expressed a negative orientation toward Item 24 (be sexually intimate with a professor in return for a grade).

Since two discrete clusters of persons emerged when responses to items on the AMS from subjects in Sample II were intercorrelated and factor analyzed using the Q-technique, hypothesis two was also rejected.

Comparison of the Results Across Samples

There were marked similarities in the person factors which emerged across the two samples of graduate education students. Students in Factor I of both samples indicated a propensity toward quasi-misconduct and subtle manipulative behaviors, while these same persons expressed a negative orientation toward cheating on tests and assignments inside the classroom. Persons in Factor II of both samples also expressed a tendency to engage in quasi-misconduct. In addition, items related to cheating on tests and assignments and use of illegal resources served to differentiate these two person clusters. By contrast to the persons in Factor I, Factor II persons in both samples reacted negatively toward subtle and bold manipulative behaviors. As previously mentioned, it should be noted that these behaviors may not necessarily occur. These results merely indicate a propensity toward or away from the various types of misconduct assessed using the AMS.

Conclusion

Results of the present study indicate that subjects' responses to items on the Academic Misconduct Survey served as an effective means for determining differences in people. That the person factors which emerged across the two samples shared many of the same characteristics is noteworthy. As Neale and Liebert (1980) have explained, "A particularly important step in factor-analytic research is replication. Because of the complex mathematics, factor analyses do not always produce results that are repeatable. Therefore, replication is essential before the results can be confidently accepted" (p. 101). Neale and Liebert (1986) further note:

> No one study, however shrewdly designed and carefully executed, can provide convincing support for a causal hypothesis or theoretical statement in the social sciences. . . . How, then, does social science theory advance through research? The answer is, by collecting a diverse body of evidence about any major theoretical proposition. (p. 290)

The present study was distinguished by examining Q-factors across two samples of graduate students in separate analyses. The similarities in results across these samples suggest that the results are due to systematic differences in people rather than spurious correlations attributable to sample bias. That these separate results appear to replicate one another lends credibility to the notion that the results are generalizable.

A further justification for generalizability is that these findings are consistent with those determined by Ferrell (1992) using a different data collection strategy and item stem.

Data were collected for the present study via the mediated-ranking procedure. In the previous study, subjects responded to survey items using an "unnumbered graphic scale" (Thompson, 1980). The factor analytic results of the two studies were remarkably similar. The person clusters which emerged across the two samples of graduate education students in the present study and the person-prototypes identified across the three samples of undergraduate teacher education students in the previous study (Ferrell, 1992) shared many of the same behavioral characteristics. A comparison of the person-prototypes and items which served to differentiate the clusters is presented in Table 5.

Insert Table 5 about here

Students in both studies generally emphasized a positive orientation toward behaviors which are not necessarily deviant or else considered only minor breaches of student integrity. Interestingly, several researchers (e.g., Stafford, 1976; Stern & Havlicek, 1986) have found that students and faculty have differing opinions regarding whether many behaviors related to the quasi-misconduct construct constitute misconduct.

Many researchers (e.g., Gay, 1987; Neale & Liebert, 1980; Scheers & Dayton, 1987; Smith, Ryan, & Diggins, 1972) concur that social desirability often characterizes self-report surveys, especially when the topic is of a sensitive nature. Social desirability is "a response set characterized by answering questions in the direction that is most socially accepted regardless of whether such an answer is actually correct for the respondent" (Neale & Liebert, 1980, p. 49). Consequently, the role expectations of persons in education could

have influenced their responses to the survey items. Yet, across different settings, the patterns of behavior were remarkably similar, regardless of the population.

Although academic misconduct has been found to be a problem of some note among college students in general, results of the present study and two previous studies (i.e., Daniel et al., 1991; Ferrell, 1992) indicate that the academic misconduct of students in education is not a significant problem. Basically, education students have indicated a propensity toward behaviors which may be perceived as less serious than some of those which have been reported by college students in general. Therefore, it may be concluded that persons in education possess the high level of personal and professional integrity needed for teaching to become a true profession.

REFERENCES

Bowers, W. J. (1964). Student dishonesty and its control in college. New York: Columbia University Bureau of Applied Social Research.

Campbell, W. G. (1933). Measurement in determining the personality and behavior of the college cribber. Education, 54, 403-408.

Carr, S. C. (1989, March). Effects of different data collection strategies on Q-technique factor analytic results. Paper presented at the annual meeting of the American Educational Research Association, San Francisco.

Cattell, R. B. (1966). The scree test for the number of factors. Multivariate Behavioral Research, 1, 245-276.

Cheating in colleges. (1976, June 7). Time, pp. 29-30.

Daniel, L. G. (1989a). Operationalization of a frame of reference for studying organizational culture in middle schools. (Doctoral dissertation, University of New Orleans, 1989). Dissertation Abstracts International, 50, 2320A-2321A. (University Microfilms No. 90-02,883)

Daniel, L. G. (1989b, November). Comparisons of exploratory and confirmatory factor analysis. Paper presented at the annual meeting of the Mid-South Educational Research Association, Little Rock, AR. (ERIC Document Reproduction Service No. ED 314 447)

Daniel, L. G., Blount, K. D., & Ferrell, C. M. (1991). Academic misconduct among teacher education students: A descriptive-correlational study. Research in Higher Education, 32(6), 703-724.

Drake, C. A. (1941). Why students cheat. Journal of Higher Education, 12, 418-420.

Edwards, A. L. (1957). The social desirability variable in personality assessment and research. Hillsdale, IL: Dryden.

Ellis, A. K., Cogan, J. J., & Howey, K. R. (1991). Introduction to the foundations of education (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Fass, R. A. (1986). By honor bound: Encouraging academic dishonesty. Educational Record, 67, 32-36.

Ferrell, C. M. (1992). A frame of reference for understanding behaviors related to the academic misconduct of undergraduate teacher education students. (Doctoral dissertation, The University of Southern Mississippi, 1992).

Gay, L. R. (1987). Educational research: Competencies for analysis and application (3rd ed.). Columbus: Merrill Publishing Company.

Goodlad, J. I., Soder, R., & Sirotnik, K. A. (Eds.). (1990). The moral dimensions of teaching. San Francisco: Jossey-Bass.

Haines, V. J., Diekhoff, G. M., LaBeff, E. E., & Clark, R. E. (1986). College cheating: Immaturity, lack of commitment, and the neutralizing attitude. Research in Higher Education, 25, 342-354.

Harnest, P. W. (1986). The perceptions of student academic honesty by faculty and students in a school of nursing (cheating). (Doctoral dissertation, North Texas State University). Dissertation Abstracts International, 47, 2825A. (University Microfilms No. 86-26,025)

Harp, J., & Taietz, P. (1966). Academic integrity and social structure: A study of cheating among college students. Social Problems, 13, 365-373.

Hetherington, E. M., & Feldman, S. E. (1964). College cheating as a function of subject and situational variables. Journal of Educational Psychology, 55, 212-218.

Howe, K. R. (1986). A conceptual basis for ethics in teacher education. Journal of Teacher Education, 37(3), 5-12.

Karlins, M., Michaels, C., & Podlogar, S. (1988). An empirical investigation of actual cheating in a large sample of undergraduates. Research in Higher Education, 29(4), 359-365.

Kerlinger, F. N. (1979). Behavioral research: A conceptual approach. New York: Holt, Rinehart, and Winston.

Lorr, M. (1983). Cluster analysis for social scientists: Techniques for analyzing and simplifying complex blocks of data. San Francisco: Jossey-Bass.

Mano, D. K. (1987, June 5). The cheating industry. National Review, pp. 50, 52-53.

McCollum, J., & Thompson, B. (1980). Analysis of attitudinal data: Dealing with "response error." Paper presented at the annual meeting of the American Educational Research Association, Boston, MA.

McQueen, R. (1957). Examination deception as a function of residual, background, and immediate stimulus factors. Journal of Personality, 25, 643-650.

Michaels, J. W., & Miethe, T. D. (1989). Applying theories of deviance to academic cheating. Social Science Quarterly, 70, 870-885.

Neale, J. M., & Liebert, R. M. (1980). Science and behavior: An introduction to the methods of research (2nd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Neale, J. M., & Liebert, R. M. (1986). Science and behavior: An introduction to the methods of research (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.

Nucci, L., & Pascarella, E. T. (1987). The influence of college on moral development. In J. C. Smart (ed.), Higher education: Handbook of theory and research (pp. 271-326). New York: Agathon.

Parr, F. W. (1936). The problem of student honesty. Journal of Higher Education, 7, 318-326.

Pratt, C. B., & McLaughlin, G. W. (1989). An analysis of predictors of college students' ethical inclinations. Research in Higher Education, 30, 195-219.

Rich, J. M. (1984). Professional ethics in education. Springfield, IL: Charles C. Thomas.

Rich, J. M. (1985). The role of professional ethics in teacher education. Action in Teacher Education, 7(3), 21-24.

Scheers, N. J., & Dayton, C. M. (1987). Improved estimation of academic cheating behavior using the randomized response technique. Research in Higher Education, 26, 61-69.

Selwall, G., Drake, S., & Lee, E. D. (1980, May 26). An epidemic of cheating. Newsweek, p. 63.

Sherrill, D., Salisbury, J. L., Horowitz, B., & Friedman, S. T. (1971). Classroom cheating: Consistent attitude, perceptions, and behavior. American Educational Research Journal, 8, 503-510.

Sichel, B. A. (1990). The professional ethics of teachers in a democratic school. Paper presented at the annual meeting of the South Atlantic Philosophy of Education Society, Winston-Salem, NC. (ERIC Document Reproduction Service No. ED 317 519)

Sierles, F., Hendrickx, I., & Circle, S. (1980). Cheating in medical school. Journal of Medical Education, 55, 124-125.

Singhal, A. C. (1982). Factors in student dishonesty. Psychological Reports, 51, 775-780.

Smith, C. P., Ryan, E. R., & Diggins, D. R. (1972). Moral decision making: Cheating on examinations. Journal of Personality, 40, 640-660.

Soltis, J. F. (1986). Teaching professional ethics. Journal of Teacher Education, 37(3), 2-4.

Stafford, T. H. (1976). Academic dishonesty at North Carolina State University: A student-faculty response. Raleigh, NC: North Carolina State University. (ERIC Document Reproduction Service No. ED 169 846)

Stern, E. B., & Havlicek, L. (1986). Academic misconduct: Results of faculty and undergraduate surveys. Journal of Allied Health, 15, 129-142.

Strike, K. A., & Soltis, J. F. (1985). The ethics of teaching. New York: Teachers College Press.

Thompson, B. (1980). Comparison of two strategies for collecting Q-sort data. Psychological Reports, 47, 547-551.

Tom, A. R. (1984). Teaching as a moral craft. New York: Longman Inc.

Tom, G., & Borin, N. (1988). Cheating in academe. Journal of Education for Business, 63, 163-167.

Wellborn, S. N. (1980, October 20). Cheating in college becomes an epidemic. U. S. News and World Report, pp. 39-40.

Wilkinson, J. M. (1974). The relation of two variations of classroom conditions, attitudes toward cheating, level of self actualization, and certain demographic variables to the cheating behavior of college students. (Doctoral dissertation, University of Toledo, 1973). Dissertation Abstracts International, 34, 5671A. (University Microfilms No. 74-06,938)

Appendix A

FACTOR I: Cheating on Tests and Assignments

(1) copy answers from another student during an exam.
(2) copy from a "crib sheet" during a quiz or exam.
(3) create or make use of a "test file" when the teacher does not permit keeping copies of exams.
(5) ask another student who has previously taken an exam for the answers prior to taking the test.
(6) "pad" the bibliography of a paper with sources which I have not read in order to make the effort expended in writing the paper seem more intensive.
(7) make up sources for bibliographic citations in a paper.
(8) copy directly large sections of a published work for inclusion in a written assignment without giving credit to the author.
(9) obtain an unauthorized copy of a test prior to the test being given.
(12) permit another student to look at my test paper or answer sheet during an exam.
(14) copy a homework assignment from someone in another section of the class.
(23) look at another student's examination responses and keep my answer if both our answers were the same.
(27) exchange test papers with someone during an exam.
(28) allow another student to copy from my paper during an exam.
(35) have another student write a paper and present it as my own work.
(40) have another student write an assignment and present it as my own work.

FACTOR II: Use of Illegal Resources

(16) write a research paper for another student.
(26) ask another student to take an exam for me.
(29) copy a few phrases or sentences from a published work for inclusion in a written assignment without giving credit to the author.
(30) take material from the library without properly checking it out.
(31) collaborate with someone on a take-home exam which was intended to be an independent activity.
(34) ignore incorrect answers when allowed to self-score a test or assignment to be counted as part of the course grade.
(36) tear pages out of journals or books in the college/university library.
(37) delay turning in a paper due to a false excuse.

FACTOR III: Quasi-Misconduct

(17) read a condensed version of a novel/play/etc. rather than the assigned full-length version.
(18) consciously memorize a block of questions on an exam, so that they could be included in a test file for later use by others.
(19) consciously memorized a block of questions on an exam, so that I could review them at a later date.
(20) have a term paper typed and corrected for errors in style, language, grammar, etc., when these elements were not being graded.
(21) have a term paper typed and corrected for errors in.style, language, grammar, etc., when these elements were being graded.
(25) base an "article report" on the abstract rather than reading the entire article.

FACTOR IV: Subtle Manipulation

(4) buy gifts (e.g., garden produce, vacation acquisitions, trinkets) for a professor in hopes of influencing a higher grade.
(10) phone a professor on some pretense in hopes of influencing a higher grade.
(11) remove pages from a reserved reading file rather than make copies for my own use.
(13) offer exaggerated accounts of personal problems (e.g., hospitalization, automobile breakdown) to a professor in hopes of influencing a higher grade.
(15) visit a professor after an exam to bias grading.
(24) be sexually intimate with a professor in return for a grade.
(33) flirt with or carry on a prolonged conversation with a professor in hopes of influencing a higher grade.
(39) make exaggerated, favorable claims regarding a professor in hopes of influencing a higher grade.

FACTOR V: Bold Manipulation

(22) obtain a copy of an exam by having a student who is not enrolled in the class "sit for" the exam or quiz and not turn in a paper.
(32) insinuate sexual intimacy with a professor in return for a grade.
(38) buy a meal for a professor in hopes of influencing a higher grade.
(41) change a response on an exam after it was returned, and then report to the instructor that an error was made in my grade.

Appendix B

DATA SHEET

Degree sought: (Circle One) Master's Doctorate

Instructions

1. Please consider the following stem in reference to each of the statements printed on the cards:
   As a graduate student, I would be likely to . . .
2. Arrange the cards into 7 stacks as shown below. The number of cards you are allowed to put in each stack is indicated in the box.
3. Rank the cards within each stack. The statement with which you most strongly disagree will be the first card in stack one, and the statement with which you most strongly agree will be the last card in stack seven.
4. Write the card numbers below the appropriate box on this sheet.

Strongly Disagree- -Neutral- -Strongly Agree

3	5	7	11	7	5	3
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
	_____	_____	_____	_____	_____	
	_____	_____	_____	_____	_____	
		_____	_____	_____		
		_____	_____	_____		
			_____			
			_____			
			_____			
			_____			

Table 1
Varimax Rotated Q-Factor Structure
Sample I
(n = 20)

	Factor I	Factor II
Person1	**.65401**	**.62333**
Person2	**.82382**	.14781
Person3	.45135	**.66145**
Person4	.29908	**.63067**
Person5	-.22331	**.59189**
Person6	.06393	**.75233**
Person7	.38415	**.74920**
Person8	.46636	**.55311**
Person9	.32272	**.79885**
Person10	**.78556**	.46901
Person11	**.85289**	.21477
Person12	**.77559**	.16910
Person13	.33948	**.78928**
Person14	.33516	**.66460**
Person15	**.73472**	.27735
Person16	**.55915**	**.59414**
Person17	**.71526**	.04433
Person18	**.74738**	.49164
Person19	.36170	**.67197**
Person20	**.76460**	.45410

Table 2
Factor Scores
Sample I (Master's Degree Students)
(n = 20)

Item	Masters1	Masters2
1	**-1.67977**	.25079
2	**-1.36343**	-.18320
3	.90289	-.09027
4	**1.55793**	**-1.78346**
5	.24009	**1.24186**
6	.41680	.37882
7	-.05637	.23400
8	**-1.04862**	.78137
9	.31539	-.43604
10	**1.35255**	**-1.52179**
11	-.39410	.16654
12	**-1.33829**	**1.17010**
13	.20698	.42296
14	-.02372	**1.69878**
15	**1.08909**	**-1.21370**
16	.48211	-.18537
17	**1.50496**	**1.09711**
18	.65680	.71465
19	**1.12629**	.95330
20	**1.67556**	.64586
21	**1.46872**	**1.02649**
22	-.54118	**-1.12876**
23	-.37996	-.01720
24	**-1.17478**	**-1.79194**
25	**1.21863**	**1.05516**
26	-.84352	**-1.44028**
27	**-1.51414**	-.37502
28	**-1.42023**	.97454
29	-.40339	**1.17256**
30	-.13776	.13641
31	.04442	**1.50257**
32	**-1.03213**	**-1.70915**
33	.57362	**-1.63958**
34	-.52878	-.19300
35	-.90042	-.11750
36	-.25579	-.67277
37	.63895	.61156
38	.84093	**-1.32409**
39	**1.14556**	-.89253
40	**-1.04009**	.39904
41	**-1.38180**	.13120

Table 3
Varimax Rotated Q-Factor Structure
Sample II
(n= 21)

	Factor I	Factor II
Person1	**.76544**	.18242
Person2	**.79840**	.30278
Person3	.37024	**.66636**
Person4	**.50350**	.47622
Person5	**.70197**	.29029
Person6	**.57882**	.33372
Person7	**.69985**	.19994
Person8	.16627	**.89416**
Person9	.31285	**.73941**
Person10	**.83393**	.16051
Person11	**.55219**	**.68286**
Person12	**.73394**	.34924
Person13	**.65380**	**.59145**
Person14	.39814	**.53793**
Person15	**.62443**	.06519
Person16	**.68456**	.30504
Person17	.12997	**.83293**
Person18	.12401	**.86722**
Person19	.20952	**.71918**
Person20	**.82543**	.26379
Person21	.47368	**.53059**

Table 4
Factor Scores
Sample II (Doctoral Degree Students)
(n = 21)

Item	Doctor1	Doctor2
1	**-1.36500**	-.38202
2	-.95103	-.58198
3	.63202	.35392
4	**1.35411**	**-1.79812**
5	.46719	.65927
6	.07175	.48457
7	.00752	-.35822
8	-.61339	-.34750
9	.46825	**-1.12492**
10	**1.06126**	-.65254
11	-.44393	.23534
12	**-1.09250**	**1.17124**
13	.08719	.48041
14	.48076	**1.16860**
15	**1.28937**	-.68378
16	-.74532	**1.01916**
17	**1.38184**	**1.32999**
18	.13892	.85093
19	.44382	**1.59723**
20	**1.45550**	**1.27234**
21	**1.50632**	.80217
22	**-1.26824**	.19068
23	-.43759	.07567
24	**-1.38499**	**-1.58625**
25	-.15873	**1.37582**
26	**-1.61799**	-.68248
27	**-1.19564**	-.77474
28	**-1.37299**	.93436
29	.85721	-.08703
30	-.00781	.65784
31	-.16201	.93256
32	-.88324	**-1.64581**
33	**1.56536**	**-2.13796**
34	-.57260	-.12064
35	**-1.17057**	-.01867
36	.18008	-.48960
37	.12583	**1.39495**
38	**1.56509**	**-1.80185**
39	**1.37518**	-.94162
40	**-1.23118**	-.16239
41	-.85027	-.60896

Table 5
Comparison of Q-Factors Across Two Studies
Using Academic Misconduct Survey Data

	Undergraduate Teacher Education Students (Ferrell, 1992)			Graduate Education Students (Present Study)	
	School I (n = 15)	School II (n = 15)	School III (n =15)	Sample I (n = 20)	Sample II (n= 21)
Factor I (positive orientation)	(n = 10) **I:** 8, 14, 29 **II:** 34, 37 **III:** 17, 21, 25	(n = 11) **I:** 5, 14, 23, 28 **II:** 29, 34	(n = 13) **I:** 3 **II:** 31 **III:** 17, 19, 20, 21, 25	(n = 10) **III:** 17, 19, 20, 21, 25 **IV:** 4, 10, 15, 39	(n = 13) **III:** 17, 20, 21 **IV:** 4, 10, 15, 33, 39 **V:** 38
(negative orientation)	**I:** 26, 27, 40 **IV:** 24 **V:** 32, 38	**IV:** 4, 10, 15, & 39 **V:** 39	**III:** 18 **IV:** 33 **V:** 22, 32, 38	**I:** 1, 2, 8, 12, 27, 28, 40 **IV:** 24 **V:** 32, 41	**I:** 1, 12, 27,28, 35, 40 **II:** 26 **IV:** 24 **V:** 22
Factor II (positive orientation)	(n = 5) **I:** 1, 5, 12, 23 **III:** 19, 20	(n = 4) **I:** 5 & 6 **III:** 17, 19, 20, & 21	(n = 2) **I:** 1, 5, 12, 14, 23, 28 **II:** 39 **IV:** 33	(n = 12) **I:** 5, 12, 14 **II:** 29, 31 **III:** 17, 21, 25	(n = 10) **I:** 12, 14 **II:** 16, 37 **III:** 17, 19, 20, 25
(negative orientation)	**I:** 8 **IV:** 13, 15 **V:** 22	**I:** 28 & 40 **II:** 29, 34, & 36 **IV:** 33 **V:** 32 & 41	**I:** 3 **II:** 26 **III:** 20 **IV:** 11, 24, & 39 **V:** 41	**II:** 26 **IV:** 4, 10, 15, 24, 33 **V:** 22, 32, 38	**I:** 9 **IV:** 4, 24, 33 **V:** 32, 38

AMS Factors I: Cheating on Tests and Assignments
II: Use of Illegal Resources
III: Quasi-Misconduct
IV: Subtle Manipulation
V: Bold Manipulation